2024 IEEE International Reliability Physics Symposium - *Tutorial & Year-in-Review Program-at-a-Glance*

April 14-18 | Dallas, Texas, USA | All Times in Central Daylight Time (CDT)

9:00 AM Devices		Sunday • April 14					
Reliability Aspects of Nanowire, Nanosheet and Forksheet Devices Erik Bury, Imec 10:30 AM Break • International Foyer TUT 3 Introduction to Statistics for Reliability Kristof Croes, Imec 12:30 PM Lunch • Windfall TUT 5 Reliability of RRAM Technology in the Context of Neuromorphic Applications Cristian Zambelli, University of Ferrara Cristian Zambelli, University of Ferrara 3:30 PM Break • International Foyer TUT 7 TUT 8 Understanding and modeling Time-Dependent Dielectric Breakdown Robin Degraeve, Imec GaN Power Device Technology and Reliability Davide Bisi, Transphorm Inc. Threshold-Voltage Instability in Sic MOSFETS Aivars Lelis, Army Research Laboratory Defect Localization Methods for Device Characterization and Yield Management Greg Johnson, Carl Zeiss Microscopy TUT 7 TUT 8 Understanding and modeling Time-Dependent Dielectric Breakdown Robin Degraeve, Imec	Time	Int. I & II	Int. III & IV				
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Introduction to Statistics for Reliability in SiC MOSFETs **Reliability of RRAM Technology in the Context of Neuromorphic Applications **Cristian Zambelli, University of Ferrara** **Sign PM** **Break • International Foyer** **TUT 5** **TUT 6** **Introduction to Statistics for Reliability in SiC MOSFETs **Aivars Lelis, Army Research Laboratory** **Defect Localization Methods for Device Characterization and Yield Management** **Cristian Zambelli, Greg Johnson, Carl Zeiss Microscopy** **Sign PM** **Break • International Foyer** **TUT 7** **Understanding and modeling Time-Dependent Dielectric Breakdown** **Robin Degraeve, imec** **Synopsys** **TCAD for Reliability Karim El Sayed, Synopsys imec**	9:00 AM	Nanosheet and Forksheet Devices Erik Bury,	and Reliability Davide Bisi,				
Introduction to Statistics for Reliability in SiC MOSFETs **Reliability of RRAM Technology in the Context of Neuromorphic Applications **Cristian Zambelli, University of Ferrara** **Sign PM** **Break • International Foyer** **TUT 5** **TUT 6** **Introduction to Statistics for Reliability in SiC MOSFETs **Aivars Lelis, Army Research Laboratory** **Defect Localization Methods for Device Characterization and Yield Management** **Cristian Zambelli, Greg Johnson, Carl Zeiss Microscopy** **Sign PM** **Break • International Foyer** **TUT 7** **Understanding and modeling Time-Dependent Dielectric Breakdown** **Robin Degraeve, imec** **Synopsys** **TCAD for Reliability Karim El Sayed, Synopsys imec**	10:30 AM	10:30 AM Break • International Fover					
Introduction to Statistics for Reliability in SiC MOSFETS **Reliability For Reliability in SiC MOSFETS** **Reliability For RRAM Technology in the Context of Neuromorphic Applications** **Cristian Zambelli, University of Ferrara** **Break • International Foyer** **TUT 5** **TUT 6** **Defect Localization Methods for Device Characterization and Yield Management** **Cristian Zambelli, Greg Johnson, Carl Zeiss Microscopy** **TUT 7** **Understanding and modeling Time-Dependent Dielectric Breakdown** **Robin Degraeve, imec** **TCAD for Reliability** **Karim El Sayed, Synopsys**							
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Time-Dependent Dielectric Breakdown Karim El Sayed, Synopsys imec		TUT 7	TUT 8				
	3:30 PM	Time-Dependent Dielectric Breakdown Robin Degraeve,	Karim El Sayed,				
5:00 PM Adjourn		Adjourn					

	Monday • April 15						
Time	Int. I & II	Int. III & IV	Cap Rock I, II & III	Becker I & II			
	TUT 9	TUT 10	TUT 11	TUT 12			
8:30 AM	Reliability of Nanoelectronics based on Two-Dimensional Materials Theresia Knobloch, TU Wien	SiC Device Reliability and Failure Analysis Donald Gajewski, Wolfspeed, Inc.	Interconnect Reliability for Chip Design Baozhen Li, IBM Infrastructure	Identifying Material Features & Operation Conditions Targeting Device Neuromorphic Applications Gennadi Bersuker, M2D Solutions			
10:00 AM		Drook Into	reational Force				
10:00 AIVI	Break • International Foyer						
	TUT 13	TUT 14	TUT 15	TUT 16			
10:30 AM	Hot-carrier Degradation in MOS Transistors	GaN RFOLT for 5G/6G Applications Elias Reese, Qorvo From Fabrication to Field: The	Plasma Induced Damage (PID): From Basics to Complex Well Charging	Electrical Chip-Package-Board Reliability of 2.5D/3D Heterogeneously Integrated Systems			
	Michiel Vandemaele, imec	Importance of Semiconductor Reliability Testing Roland Shaw, STAr/Accel-RF Instruments Corporation	Andreas Martin, Infineon Technologies AG	Muhammad Ashraful Alam, Purdue University			
12:00 PM		Lunch	• Windfall				
	TUT 17	TUT 18	TUT 19	TUT 20			
1:00 PM		New Industrial Radiation Paradigms for LEO Satellite	Silicon Health & Lifecycle	Reliability Challenges of 3D			
1:00 PM	Effect of OFF-State Stress on CMOS Devices	Constellations, Full Autonomous Car Driving and Sovereign 3D Chiplets	Management, for Data Center and Automotive	NAND Flash Memory in Harsh Environments			
1:00 PM		Constellations, Full Autonomous Car Driving and Sovereign 3D Chiplets	Management, for Data Center and Automotive Jyotika Athavale &	NAND Flash Memory in Harsh Environments Biswajit Ray,			
1:00 PM	CMOS Devices Xavier Federspiel,	Constellations, Full Autonomous Car Driving and	Management, for Data Center and Automotive	NAND Flash Memory in Harsh Environments			
1:00 PM	CMOS Devices Xavier Federspiel,	Constellations, Full Autonomous Car Driving and Sovereign 3D Chiplets Phillippe Roche, STMicroelectronics	Management, for Data Center and Automotive Jyotika Athavale &	NAND Flash Memory in Harsh Environments Biswajit Ray,			
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2:30 PM	CMOS Devices Xavier Federspiel, STMicroelectronics YIR 1 - From the Mathemati	Constellations, Full Autonomous Car Driving and Sovereign 3D Chiplets Phillippe Roche, STMicroelectronics Break • Inte Year-in-Review • I cal Foundations to the Physica Hoski eakdown: Advances in Character for Low and High-Voltage F	Management, for Data Center and Automotive Jyotika Athavale & Yervant Zorian, Synopsys rnational Foyer International III & IV I Models: A Year in Review of Notins, NIST rization Techniques and Extrapolati ETS, Bonnie E. Weir, Broadcom	NAND Flash Memory in Harsh Environments Biswajit Ray, Colorado State University euromorphic Reliability Brian on to Use Conditions			
2:30 PM 3:00 PM	CMOS Devices Xavier Federspiel, STMicroelectronics YIR 1 - From the Mathemati	Constellations, Full Autonomous Car Driving and Sovereign 3D Chiplets Phillippe Roche, STMicroelectronics Break • Inte Year-in-Review • I cal Foundations to the Physica Hoski eakdown: Advances in Character for Low and High-Voltage Fi the Exciting Era of Compact Ele	Management, for Data Center and Automotive Jyotika Athavale & Yervant Zorian, Synopsys rnational Foyer International III & IV I Models: A Year in Review of Nation, NIST ization Techniques and Extrapolati	NAND Flash Memory in Harsh Environments Biswajit Ray, Colorado State University euromorphic Reliability Brian on to Use Conditions			